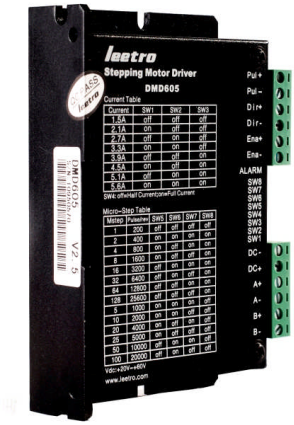
User Manual for

DMD605

(Manual Version 1.2)



Features:

- TTL compatible and optically isolated input, pulse frequency up to 360KHz
- Max Step/rev. up to 25600
- Input Voltage up to 60VDC
- Max output driving current 5.6A/phase
- Auto semi-current while in still status
- Over voltage/current protection
- CE compliant

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1. Electrical Specifications

Tj=25℃

Parameters	Min.	Typical	Max.	Unit
Output Peak Current	1.5	-	5.6	A
Power Supply	20	36	60	VDC
Logical Current	6	10	30	mA
Pulse Frequency	0	-	360	KHz
Isolation Resistance	500	-	-	MΩ
Approx. Net Weight	-	0.22	-	Kg

2. Operation Environment

Condition	Caution	Avoid dust and corrosive gas/oil
	Temp.	0℃ ～ +50℃
	Humidity	Under 90% RH
	Vibration	5.9m/s^2 Max
Storage Temperature		-20℃ ～ +65℃

3. Micro-step Setting

Micro-step	Step/rev. (1.8° Motor)	SW5	SW6	SW7	SW8
1	200	off	off	off	off
2	400	on	on	on	on
4	800	on	off	on	on
8	1600	on	off	off	on
16	3200	off	on	on	on
32	6400	off	on	off	on
64	12800	off	off	on	on
128	25600	off	off	off	on
5	1000	on	on	on	off
10	2000	on	on	off	off
20	4000	on	off	on	off
25	5000	on	off	off	off
50	10000	off	on	on	off
100	20000	off	on	off	off

NOTE:

Please shut down and re-apply power after micro-step setting is changed!

4. Pins

Pin	Description
Pul+	One step ahead when the pulse rising edge is active. Step distance is subject to the micro-step.
Pul-	
Dir+	This Active-high/low signal is used for determining the rotate direction of motor. Please note that rotation direction is also related to the connection of motor wires.
Dir-	
Ena+	This signal is used for enabling/disabling the driver. Active-high for enabling the driver (optical-isolation is not through), Active-low for disabling the driver (optical-isolation is through).
Ena-	
DC-	Power Ground
DC+	Power Supply, +20～60VDC, including voltage fluctuation and EMF voltage.
A+	Motor Phase A
A-	
B+	Motor Phase B
B-	

5. Output Current Setting

5.1 Dynamic Current

Peak Current (A)	SW1	SW2	SW3
1.5	off	off	off
2.1	on	off	off
2.7	off	on	off
3.3	on	on	off
3.9	off	off	on
4.5	on	off	on
5.1	off	on	on
5.6	on	on	on

5.2 Standstill Current

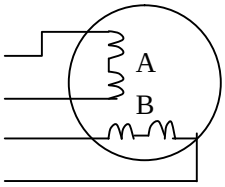
SW4 defines the standstill current.

Status “off” is to set the standstill current as 60% of dynamic current.

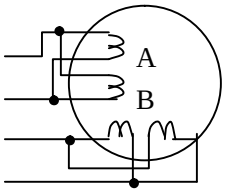
Status “on” is to set the standstill current as same as the dynamic current.

6. Wiring Connections

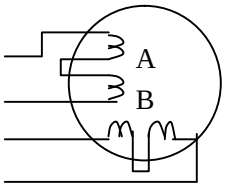
6.1 to the Stepping Motor



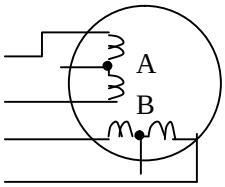
4-lead



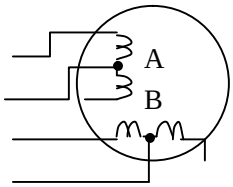
8-lead (Parallel)



8-lead (Series)



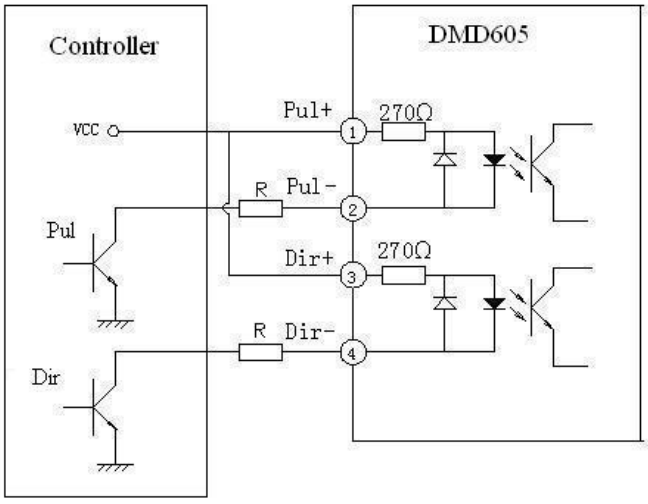
6-lead (for Higher Torque)



6-lead (for Higher Velocity)

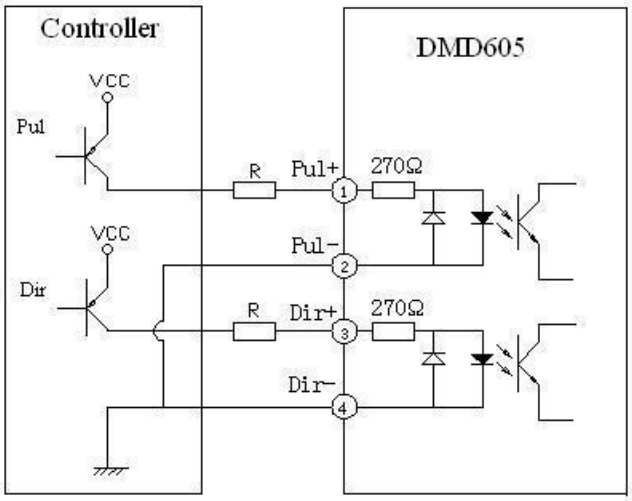
6.2 to the Controller

6.2.1 Common Anode



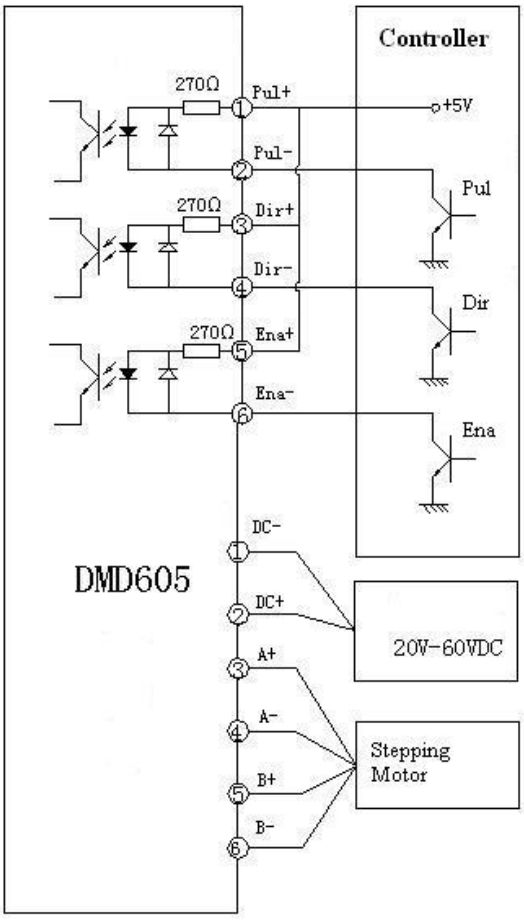
VCC=5V R=0
VCC=12V, R=1KΩ (≥1/8W)
VCC=24V, R=2KΩ (≥1/8W)

6.2.2 Common Cathode

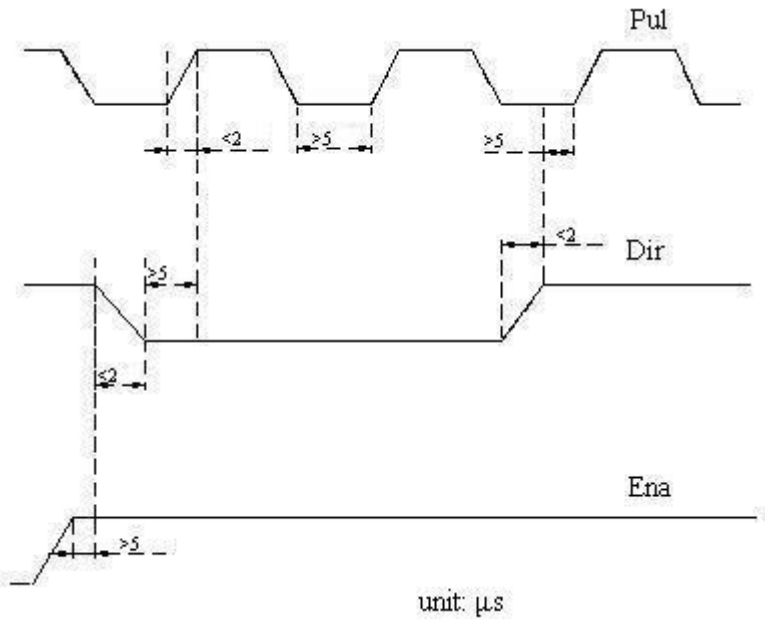


VCC=5V R=0
VCC=12V, R=1KΩ(≥1/8W)
VCC=24V, R=2KΩ(≥1/8W)

6.3 Typical System



7. Sequence Chart of Control Signal



8. Mechanical Structure (unit: mm)